**Table 1** Previous studies including supply chain characteristics and uncertainty types

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Author** | **Supply Chain Characteristic** | **Uncertainty** | **RM** | **Solution Methodology** | | | | | |
| **DOM** | **SOM** | **FM** | **ML** | **H/MH** | **Others** | |
| Holguín-Veras et al. (2014) | Robust | - | \* |  |  |  |  |  | \* | |
| Haavisto and Kovács (2015) | Robust | - | \* |  |  |  |  |  | \* | |
| Zokaee et al. (2016) | Robust | Demand and Supply |  | \* |  |  |  |  | \* | |
| Baskaya et al. (2017) | Vulnerable | - | \* | \* |  |  |  |  |  | |
| Torabi et al. (2018) | Resilience | Data | \* |  | \* | \* |  | \* |  | |
| Noham and Tzur (2018) | - | - |  | \* |  |  |  | \* |  | |
| Li et al. (2019) | Sustainable | - | \* |  |  |  |  | \* |  | |
| Wang and Zhang (2019) | Resilience | - |  |  |  |  |  |  | \* | |
| Aghajani et al. (2020) | Robust | Supplier | \* |  | \* | \* |  | \* |  | |
| Petrudi et al. (2020) | Resilience | - |  |  |  | \* |  |  | \* | |
| Alem et al. (2021) | Robust | Effected areas | \* | \* | \* |  |  | \* |  | |
| Yu et al. (2021) | - | - |  |  |  |  | \* | \* |  | |
| Cao et al. (2021) | Sustainable | Supplier | \* | \* |  | \* |  |  |  | |
| Liu et al. (2022) | Sustainable | Supply and Demand |  |  | \* |  |  |  |  | |
| Dubey et al. (2022) | Resilience and Agile | - |  |  |  |  | \* |  | \* | |
| Ershadi and Shemirani (2022) | Robust | Vehicles and centers |  |  |  |  |  |  | \* | |
| Kaur and Singh (2022) | Resilience | - | \* | \* |  |  |  |  | \* | |
| Stewart and Ivanov (2022) | Resilience | - | \* |  |  |  |  |  | \* | |
| Van Steenbergen et al. (2023) | Robust | Travel time |  |  |  |  | \* |  |  | |
| Daneshvar et al. (2023) | Robust | Demand | \* |  | \* |  |  |  |  | |
| Bag et al. (2023) | Sustainable and Agile | - | \* |  |  |  | \* |  | \* | |
| Nguyen et al. (2023) | Robust | Environment | \* |  |  |  | \* |  | \* | |
| Masoomi et al. (2023) | Robust | - |  |  |  |  |  |  | \* | |
| Hu et al. (2024) | Sustainable | Demand | \* |  | \* |  | \* |  |  | |
| Khalili-Fard et al. (2024) | Resilience and Reliable | Donation | \* |  | \* | \* |  | \* |  | |
| Tarei et al. (2024) | Resilience | Environment | \* |  |  |  |  |  | \* | |
| Dohale et al. (2024) | - | Data | \* |  |  |  |  |  | \* | |
| Camur et al. (2024) | Resilience | - | \* |  |  |  | \* |  | \* | |
| Shakibaei et al. (2024) | Resilience | - |  | \* |  |  |  |  | \* | |
| Wang et al. (2024) | Resilience | Data | \* |  |  | \* |  |  | \* | |
| **This paper** | **Resilience and Viable** | **Demand and Capacity** | **\*** |  | \* |  | \* | \* |  | |
| DOM: Deterministic optimization model; SOM: Stochastic optimization model; FM: Fuzzy method; ML: Machine Learning; H/MH: Heuristic/Meta-Heuristic; RM: Risk management | | | | | | | | | | | |